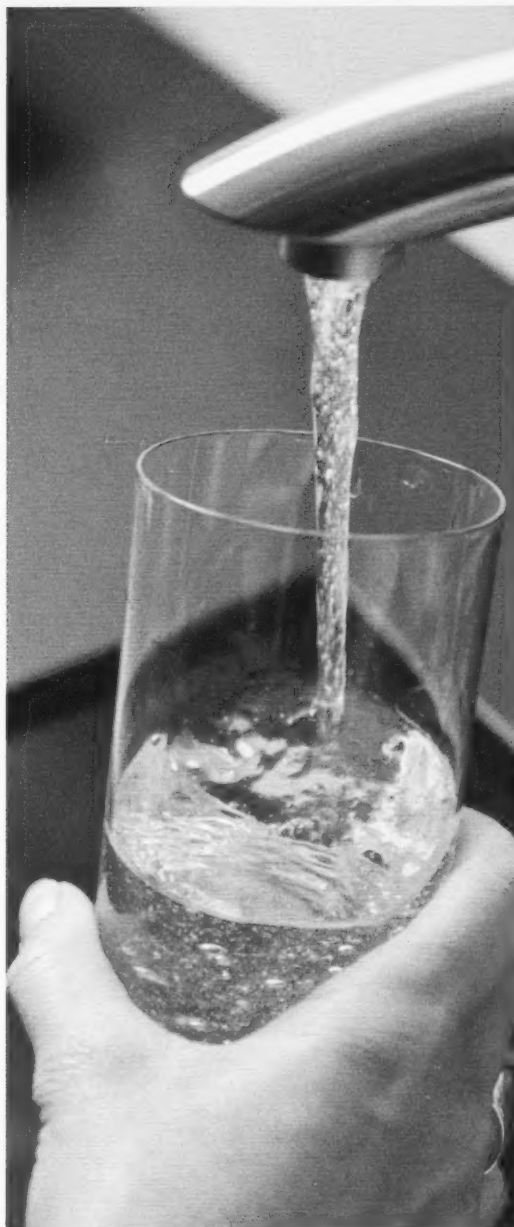


# Minister's Annual Report on Drinking Water // 2012





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**For more information:**  
**[www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater)**

# Minister's Message.

Ontarians deserve clean, safe drinking water anytime they turn on a tap in our province — and they are getting it. In fact, Ontario's Chief Drinking Water Inspector found that our drinking water is among the best-protected in the world.

As the Minister of Environment, I am pleased with what we have accomplished since the depths of the Walkerton drinking water tragedy in 2000. Our strong safety net enables us to deliver clean drinking water across Ontario.

Our government has taken action to not only safeguard one of our greatest natural resources but to champion safe drinking water to encourage innovation in the sector.

The Water Opportunities Act laid the foundation for Ontario to become a leader in developing water technologies, creating more clean water jobs and making our expertise available globally.

The stories featured in this report highlight the innovative technologies and community dedication that have established, and continue to reinforce, our leadership in safe drinking water. The combined efforts of business, government and communities have increased public awareness of the importance of water

conservation and the role we all play in helping ensure cleaner, safer drinking water.

The results reported by the Chief Drinking Water Inspector reflect the success of our safeguards. Ontario's safety net also means having well-trained, knowledgeable drinking water system owners and operators. They have been doing a tremendous job of keeping up to date with the newest trends and techniques for maintaining safe drinking water supplies.

One element in providing safe drinking water for Ontarians is the protection of local source water. This work is being done by 19 local source protection committees across the province. These committees submitted assessment reports to my ministry. The reports form the basis of the protection plans for local source water. Most of these protection plans have been submitted and are being reviewed. This work demonstrates a strong commitment from local communities to protect the sources of their drinking water.

Our government applauds the hard work and determination of source protection committees, municipalities, First Nations, academics, local conservation authorities, owners and operators of drinking water systems, community groups and citizens to



ensure a safe drinking water legacy for future generations.

Nurturing that legacy means we also have to be alert for emerging water issues so we can continue to safeguard our water supplies in the future.

I look forward to working with all of our partners to maintain Ontario's high quality drinking water. It is a testament to the collective commitment of Ontarians to protecting water that we have achieved such success this past decade.

**The Honourable Jim Bradley**  
Minister of the Environment  
Government of Ontario  
December 2012

# Status Of Drinking Water In Ontario.

Across the globe, Ontario is recognized as a world leader in protecting drinking water. Our strong legislation and regulations — part of our world-class safety net — have helped to build our global reputation. Our actions today will leave a safe drinking water legacy for our children and grandchildren. And for that reason, we remain committed to protecting and sustaining drinking water in Ontario — now and for future generations.





## Ontario's Drinking Water Safety Net

Over the past decade, we have worked with many partners across the province to build an innovative, award-winning drinking water safety net that includes extensive safeguards. We have put in place solid legislation, stringent standards, ongoing and reliable testing, and regular inspections to help ensure your drinking water is safe.

We will continue our collaborative approach going forward. Safety measures are built into every step of the process to protect the quality and safety of our drinking water — from its source to your tap. For more information on the safety net, please visit Drinking Water Ontario, at [www.ene.gov.on.ca/environment/dwo/en/story/STD-PROD\\_095727.html](http://www.ene.gov.on.ca/environment/dwo/en/story/STD-PROD_095727.html).

### LAKEHEAD SOURCE PROTECTION COMMITTEE — THE FIRST TO COMPLETE ITS PLAN

Source protection committees in Ontario are tasked with preparing science-based plans that, once in place, will protect more than 450 municipal drinking water sources from groundwater to surface water, including the Great Lakes.

In July 2012, the Lakehead Source Protection Committee became the first to submit its source protection plan. Developed by local communities, this plan covers the City of Thunder Bay, which draws its drinking water from Lake Superior, and the Municipality of Oliver Paipooonge and Rosslyn Village, which relies on groundwater.

Source protection plans focus on prevention by identifying and managing risks to the quality and quantity of local drinking water sources.

## Strong Legislation and Regulations

### IT STARTS WITH THE SOURCE

High quality drinking water starts with protecting the source: surface and groundwater.

We believe that the best approach to protecting the source is through the local communities that rely on safe water.

Under the Clean Water Act, there are 19 locally-based source protection committees which include representatives of municipalities, farmers, industry and the general public. More than 300 people from various sectors make up these committees to plan for the best protection possible for Ontario watersheds.

Seventeen committees have submitted their source protection plans, based on science that identified existing and potential risks to sources of municipal drinking water. The plans for the remaining two source protection committees are due by December 31, 2012.

The source protection plans aim to protect the safety and sustainability of local water supplies. These plans will help manage risks to municipal drinking water sources identified in the science-based assessment reports developed by the source protection committees. Source protection plans will be implemented through a collaborative effort involving municipalities, conservation authorities, landowners and provincial ministries.



"Reaching this milestone was made possible by the hard work and dedication from several local community groups, agencies and the public. As a result, we believe the Lakehead Source Protection Plan will help ensure drinking water sources for Rosslyn Village and the City of Thunder Bay will be protected for citizens today and in the future."

— **Bob Hartley**, Chair, Lakehead Source Protection Committee

### **Ontario Drinking Water Stewardship Program**

Every day, Ontarians across the province work or volunteer to protect and conserve one of our greatest natural resources: water.

The Ontario Drinking Water Stewardship Program supports that community drive and spirit by providing financial help to landowners, businesses, and municipalities to take early actions in protecting local drinking water

sources. So far, more than 2,000 local initiatives have been funded through the program.

For more information on source protection please visit Drinking Water Ontario, at [www.ene.gov.on.ca/environment/en/subject/protection/index.htm](http://www.ene.gov.on.ca/environment/en/subject/protection/index.htm) and Conservation Ontario at [www.conservationontario.ca/source-protection/otherswpreionsindex.htm](http://www.conservationontario.ca/source-protection/otherswpreionsindex.htm).

## **FIRST NATIONS PARTICIPATION CONTRIBUTES TO THE SUCCESS IN SOURCE PROTECTION PLANNING**

First Nations have been instrumental in achieving the goal of developing plans to protect Ontario's drinking water sources since source protection planning was introduced in 2007. Nearly half of the local source protection committees currently have active First Nations representatives. Their engagement and perspective continue to be invaluable to the development of plans that will effectively protect water supplies for future generations.

To further protect their drinking water supplies, Kettle and Stony Point First Nation, Six Nations of the Grand River and the Rama First Nation, have all passed Band Council Resolutions to be included in the planning process under the Clean Water Act.

## **Monitoring Ontario's Water Sources**

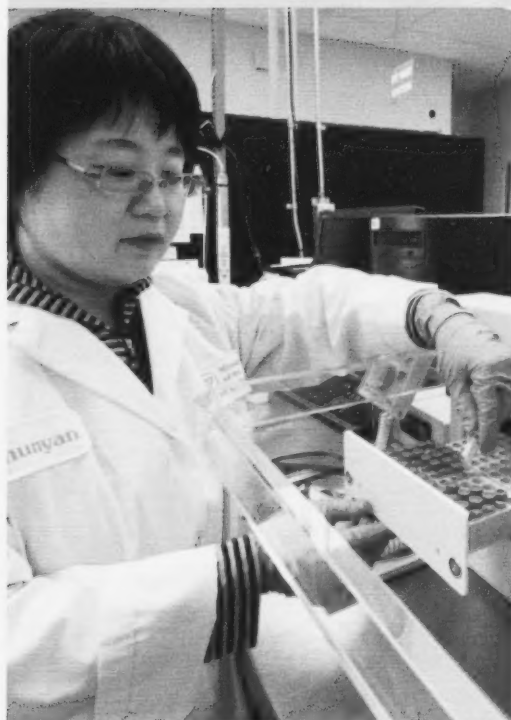
My ministry is committed to protecting the safety of Ontario's drinking water. Ministry staff extensively monitor the water quality in the Great Lakes, inland lakes, rivers, streams, and ground water across the province. We monitor to understand the state of our water resources, the impacts of human activities, the causes of problems and to identify emerging issues. We also use this information to develop new protection measures and track and report on our progress in improving and protecting water resources.

The results of our monitoring efforts can be found in the *Water Quality in Ontario Report 2010* ([www.ene.gov.on.ca/environment/en/resources/STDPROD\\_095146.html](http://www.ene.gov.on.ca/environment/en/resources/STDPROD_095146.html)).



## Drinking Water Surveillance Program

The Drinking Water Surveillance Program ([www.ontario.ca/dwsp](http://www.ontario.ca/dwsp)) monitors the quality of Ontario's source water and treated drinking water. The program monitors emerging contaminants such as algal toxins and pharmaceuticals. Municipalities participate voluntarily in the program, a valuable partnership since the program began in 1986.



## MORE INFORMATION AND DATA ON OUR MONITORING PROGRAMS CAN BE FOUND AT:

- Provincial (Stream) Water Quality Monitoring Network Program — [www.ene.gov.on.ca/environment/en/monitoring\\_and\\_reporting/provincial\\_water\\_quality\\_monitoring\\_network/index.htm](http://www.ene.gov.on.ca/environment/en/monitoring_and_reporting/provincial_water_quality_monitoring_network/index.htm)
- Provincial Groundwater Monitoring Network Program — [www.ene.gov.on.ca/environment/en/monitoring\\_and\\_reporting/provincial\\_groundwater\\_monitoring\\_network/index.htm](http://www.ene.gov.on.ca/environment/en/monitoring_and_reporting/provincial_groundwater_monitoring_network/index.htm)
- Inland Lakes Monitoring Program — [www.desc.ca](http://www.desc.ca)
- Lake Partner Program — [www.desc.ca/programs/LPP](http://www.desc.ca/programs/LPP)
- Ontario Benthos Biomonitoring Network — [www.desc.ca/programs/OBBN](http://www.desc.ca/programs/OBBN)
- Sport Fish Contaminant Monitoring Program — [www.ontario.ca/fishguide](http://www.ontario.ca/fishguide)
- Interactive maps and data downloads — [www.ene.gov.on.ca/environment/en/mapping/index.htm](http://www.ene.gov.on.ca/environment/en/mapping/index.htm)

## Municipal Licensing Program

The Safe Drinking Water Act requires that all municipal residential systems in Ontario be licensed under the municipal drinking water licensing program — the first of its kind in North America.

To be licensed, municipalities owning a drinking water system must first develop and implement a quality management system that reflects key aspects of how the system is operated and maintained. These system owners must also have an operating authority in charge of their system who must be *accredited* by a

third-party organization with independent and experienced auditors. In addition, owners are required to develop a financial plan to assist in planning for long-term financial sustainability. As of September 2011, all municipal residential drinking water system owners in the province received their licences.



## Operator Certification and Training

The responsibility of a municipality that owns a municipal residential drinking water system does not stop at getting a municipal drinking water licence. Owners must ensure that employees who operate the drinking water system are certified drinking water operators who have met Ontario's comprehensive examinations and rigorous continuing education requirements.

Operators can hold different types of certificates, depending on the types of drinking water systems for which they are responsible. As of March 31, 2012, there were 6,414 certified drinking water operators in Ontario, holding 8,914 certificates.

In 2011-12, 1,414 drinking water operator-in-training certificates were issued to 828 new individuals in the province. This is an eight per cent increase in persons holding these certificates since 2009-10. This increase in persons holding entry level drinking water certificates will help

municipalities with succession planning, ensuring that retiring operators are replaced by knowledgeable staff who are able to operate a variety of different types of drinking water systems.

### THE WALKERTON CLEAN WATER CENTRE

The high quality of Ontario's drinking water reflects the fact that owners, operators and operating authorities of drinking water systems receive training.

Since 2004, the Walkerton Clean Water Centre has been providing first-class training and certification programs across the province. The Centre develops and delivers training courses to Ontario's drinking water system owners, operators and operating authorities, including First Nations communities. The Centre's Technology Demonstration Facility serves as a platform for hands-on training as well as water research and innovation.

As of August 2012, the Centre has trained more than 37,000 water professionals.

More information about the Walkerton Clean Water Centre can be found at [www.wcwc.ca](http://www.wcwc.ca).

## Report on Drinking Water Standards

There are 158 health-based quality standards to keep Ontario's drinking water clean and safe. We monitor these standards regularly to ensure they are up to date. Ontario's Advisory Council on Drinking Water Quality and Testing Standards provides recommendations and guidance on standards and other issues that could affect the delivery of high quality drinking water. To learn more about the council's work, please visit [www.odwac.gov.on.ca](http://www.odwac.gov.on.ca).



Thirsty? Turn on your tap.

A refreshing glass of clean water is as close as your kitchen sink.



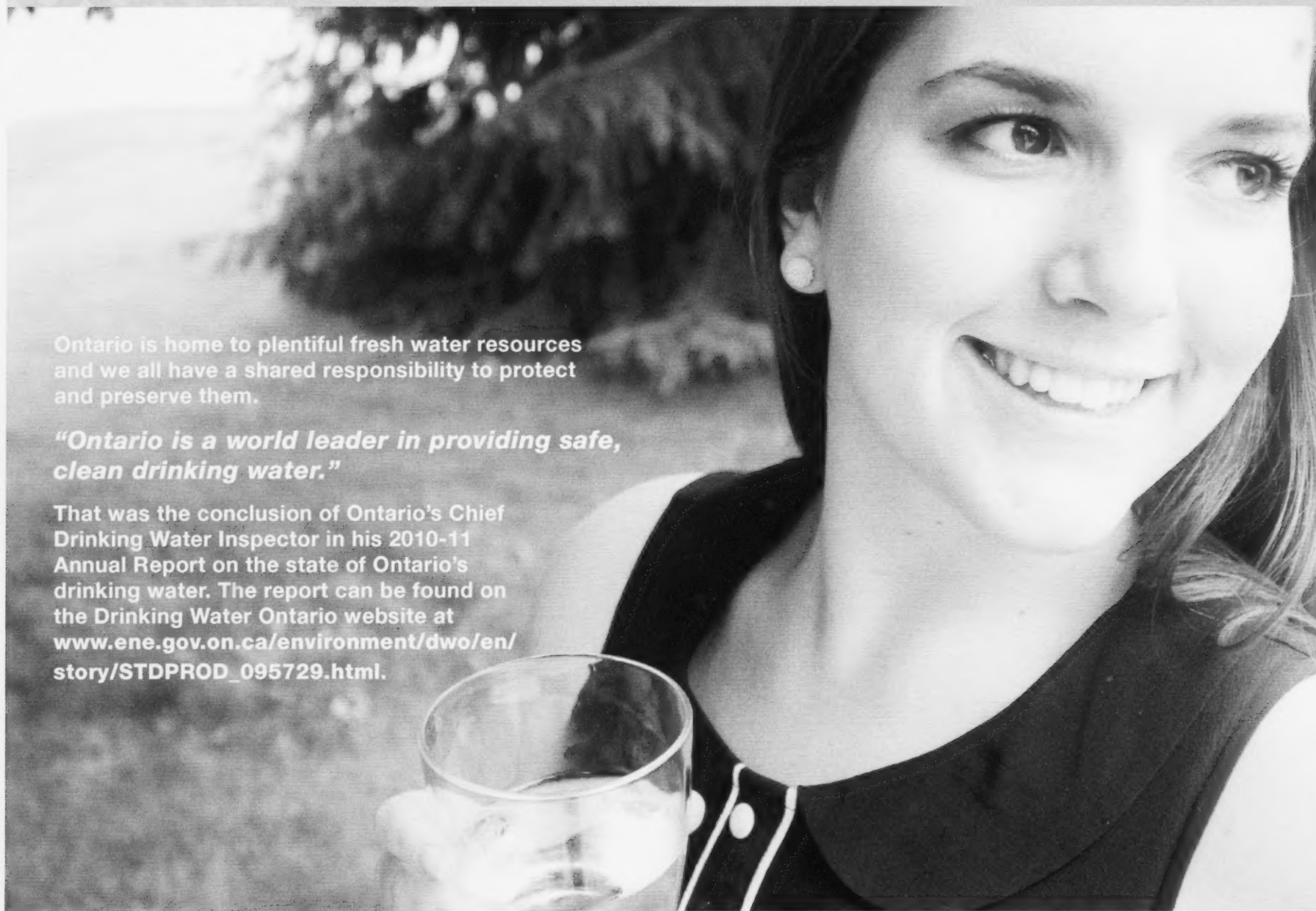


# Ontario's Drinking Water Report Card.

Ontario is home to plentiful fresh water resources and we all have a shared responsibility to protect and preserve them.

*"Ontario is a world leader in providing safe, clean drinking water."*

That was the conclusion of Ontario's Chief Drinking Water Inspector in his 2010-11 Annual Report on the state of Ontario's drinking water. The report can be found on the Drinking Water Ontario website at [www.ene.gov.on.ca/environment/dwo/en/story/STDPROD\\_095729.html](http://www.ene.gov.on.ca/environment/dwo/en/story/STDPROD_095729.html).



## Safety in Numbers for 2010-11:

Laboratories eligible to perform drinking water tests submitted more than 639,000 test results to the ministry from drinking water systems across Ontario.

**99.87%** of drinking water tests from municipal residential drinking water systems met our strict health-based quality standards — this number has been consistently high for the past seven years.

**99.38%** of drinking water tests from non-municipal year-round residential systems, such as mobile home parks, met Ontario's rigorous health-based quality standards.

**99.43%** of drinking water tests from systems serving designated facilities such as day nurseries, schools and health centres met our health-based quality standards.

## Inspections Results for Drinking Water Systems

Six hundred and eighty-two **municipal residential drinking water systems** were inspected in 2010-11.

Sixty-five per cent of these municipal residential drinking water systems achieved an inspection rating of 100 per cent — an increase of 32 per cent since we began reporting on operational performance six years ago.

Almost 35 per cent of municipal residential drinking water systems inspected received ratings between 80 and 99.99 per cent.

Inspections led to five orders being issued for violations at five municipal residential drinking water systems. Four additional orders were issued to four municipal residential drinking water systems as a result of incidents or issues that occurred outside of the inspection timeframe.

In 2010-11, 31 orders were issued to 30 **non-municipal year-round systems** and **systems serving designated facilities**.

No orders were issued resulting from inspections of seven drinking water systems operated by **local service boards**.



Carrying a reusable water bottle wherever you go is both helpful to the environment and economical. Many businesses or public places in Ontario allow people to refill their containers for free. Find out more at **[www.bluew.org](http://www.bluew.org)**.



## Inspection Results for Drinking Water Testing Laboratories

Laboratories that test drinking water samples make up an important part of our safety net. Ministry staff regularly inspect these laboratories to help ensure the accuracy of results.

Ontario's drinking water is regularly tested. During the 2010-11 reporting period, these tests were conducted by licensed laboratories in Ontario as well as one eligible laboratory outside the province. We perform comprehensive inspections of all these laboratories to ensure their performance meets Ontario's strict standards. During the reporting period ministry staff carried out 106 inspections.

If ministry staff encounter any violation of the standards and regulations, they ensure owners and/or operators take action to address the issue.

## Enforcement Results

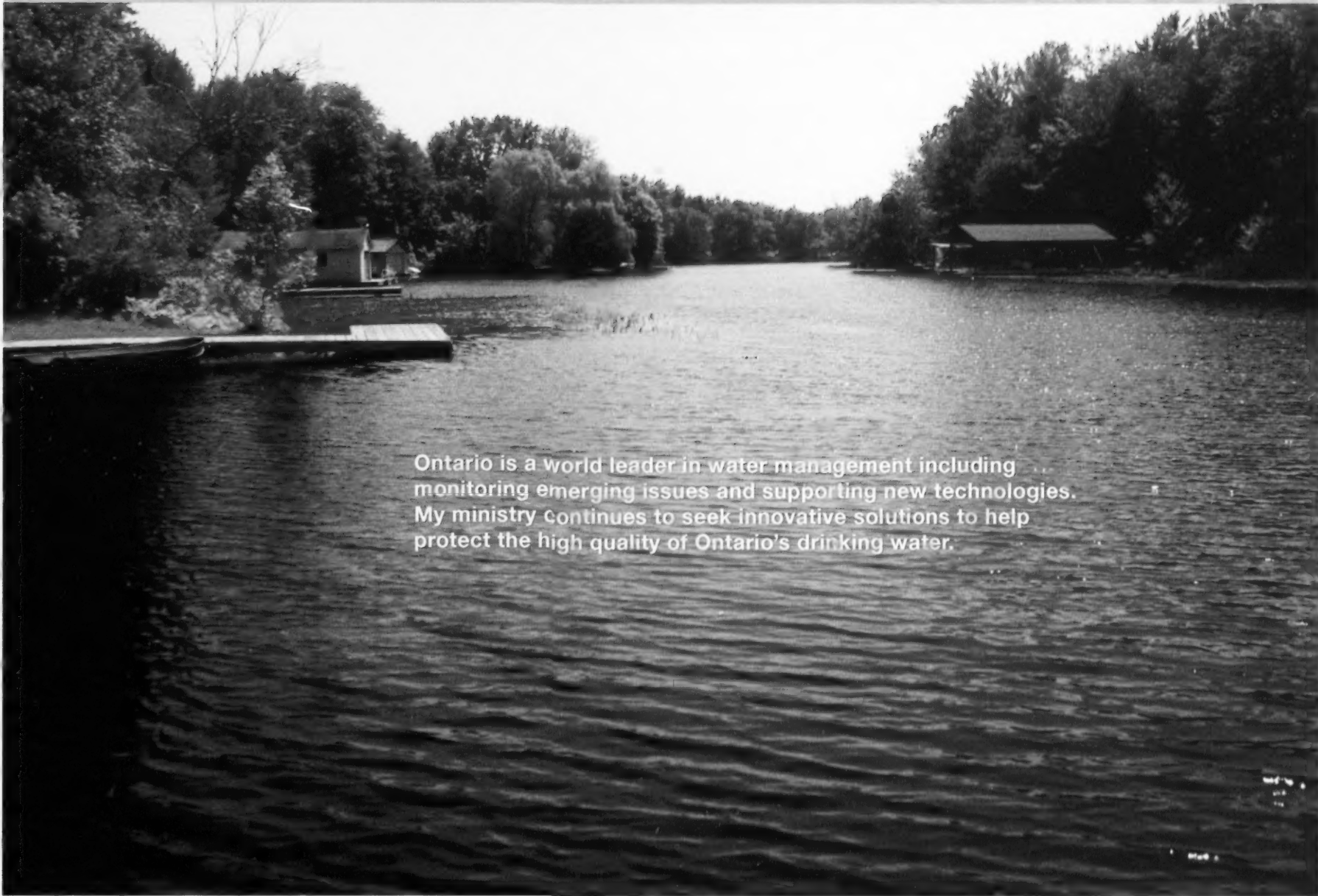
In 2010-11, there were 14 cases involving convictions at 13 regulated drinking water systems and licensed laboratories with fines totaling \$199,300.



Dumping paint, cooking oil and other chemicals into kitchen and storm drains pollutes our drinking water sources. Check your municipality's website for rules and best practices around waste disposal.



# The Future Of Drinking Water In Ontario.



Ontario is a world leader in water management including monitoring emerging issues and supporting new technologies. My ministry continues to seek innovative solutions to help protect the high quality of Ontario's drinking water.



## Pharmaceuticals in Drinking Water

A wide range of pharmaceuticals, used every day in Ontario, are introduced into our water system through human and animal waste as well as improper disposal. When they enter a water system, these pharmaceuticals are difficult to detect because they exist at very low concentration levels.

My ministry is committed to working with researchers and innovators to address pharmaceutical contaminants in drinking water. We also recognize the importance of home grown activities to work toward finding solutions to remove pharmaceuticals from our drinking water.

Our collaborative study on **nanofibre membranes** with the University of Ottawa and the National University of Singapore is now complete. The results showed that these membranes work as excellent filters to reduce emerging contaminants (e.g., pharmaceuticals) as well as other compounds found in water and wastewater.

In another collaborative study, ministry staff and Trent University researchers are currently conducting a study on pharmaceuticals in both untreated source water and treated drinking water to evaluate the usefulness of special



monitoring equipment called **polar organic chemical integrative samplers**, in drinking water plants. By using these special samplers, we can identify compounds we would not be able to detect using standard sampling techniques because they are at very low levels. The study is expected to be completed in 2014.

Additionally, through the Showcasing Water Innovation program ([www.ontario.ca/waterinnovation](http://www.ontario.ca/waterinnovation)), my ministry has invested in testing an innovative way of removing pharmaceuticals from wastewater at the Keswick Water Pollution Control Plant in the Regional Municipality of York.

To further protect our source water and public health, my ministry introduced a new regulation under the Environmental Protection Act, for the collection and management of post-consumer waste pharmaceuticals and sharps such as needles. The regulation, the key provisions of which come into effect on January 1, 2013, requires producers to take responsibility for the collection and proper management of these wastes, thus reducing the amount of pollutants that could potentially enter our source water.

## ONTARIO CLEAN WATER AGENCY – PROMOTING INNOVATION AND COLLABORATING THROUGH STRATEGIC PARTNERSHIPS

The Ontario Clean Water Agency is playing a key role in making Ontario the North American leader in developing and selling innovative clean water technology and services, both locally and internationally, by working closely with clients and other stakeholders to pursue innovative solutions to provide safer and more efficient clean water services.

The Agency's Technology Showcase, held in December 2011 and 2012, brought together various stakeholders within the water and wastewater industry, including water operators, municipal owners, entrepreneurs, financiers, regulators and academics, to discuss innovation and hear about new and emerging clean water technologies.

The Agency has also established relationships with a number of organizations within Ontario, across North America and around the

world to share resources, explore opportunities for innovation and business partnerships and address key global challenges. A recent agreement with the City of Kawartha Lakes and Fleming College has been established to help entrepreneurs prove their innovations at operations in Ontario. In addition, the Agency is partnering with companies such as Global Water Resources to bring infrastructure and smart water solutions to Canadian cities and has established relationships with international utilities such as Mekorot in Israel to share best practices for operating water and wastewater facilities.

By supporting innovation and establishing strategic partnerships with industry stakeholders, the Ontario Clean Water Agency is helping to improve the way clean water is produced while enhancing Ontario's position in the global water market.

## Nutrient and Algal Issues in Ontario Lakes

Algal blooms usually occur in the late summer and early fall. A bloom is a large mass of algae that is formed as a result of a number of ecosystem changes. These changes are brought about by an elevated presence of nutrients, invasive species such as quagga mussels, or light and

temperature conditions that are favourable for the algae to multiply quickly.

There is more than one variety of algae. When alive they provide food for a variety of fish. When algae blooms die, some of the varieties release odorous chemicals into the water that can affect the taste and/or smell of our drinking water. Others, such as some types of blue-green algae (cyanobacteria), release toxins that can

cause health issues for humans and animals. As such, algae blooms have the potential to negatively impact drinking water quality, recreational activities, tourism, commercial fisheries and lakeshore property values.

My ministry has a protocol in place for responding to occurrences of blue-green algal blooms in Ontario lakes. Ministry staff work closely with the local Medical Officers of Health

to ensure timely, appropriate action is taken. Local Medical Officers of Health address public health concerns with respect to blue-green algal blooms, and communicate with consumers and drinking water system owners within their area.

A survey conducted by ministry staff for cyanobacterial toxins at 18 drinking water facilities from 2004 to 2010, suggests that water treatment plants have been effective at removing or inactivating these toxins in drinking water.



Why not save money while conserving water? By buying products marked with the WaterSense Label, you can do just that! WaterSense products are 20 per cent more water efficient.

The reoccurrence of algal blooms in certain areas of the Great Lakes, such as Lake Erie, has prompted discussions with the International Joint Commission, federal, state and other

provincial governments as well as non-government bodies to improve the ecological conditions of our Great Lakes.

## FIRST NATIONS

Ontario takes great pride in being able to provide safe, clean drinking water to people across the province. Some First Nations communities have had difficulty accessing drinking water that meets standards. Remote, rural areas can also encounter challenges in accessing safe drinking water.

Together with Ontario First Nations Technical Services Corporation and our federal colleagues at Aboriginal Affairs and Northern Development Canada, we are working with First Nations communities to explore new ways to address specific technical challenges they face, and improve drinking water quality over the long term. The Canada-Ontario First Nations Drinking Water Improvement Initiative will support First Nations communities' efforts to decide on and implement suitable approaches and solutions to resolve their drinking water challenges.

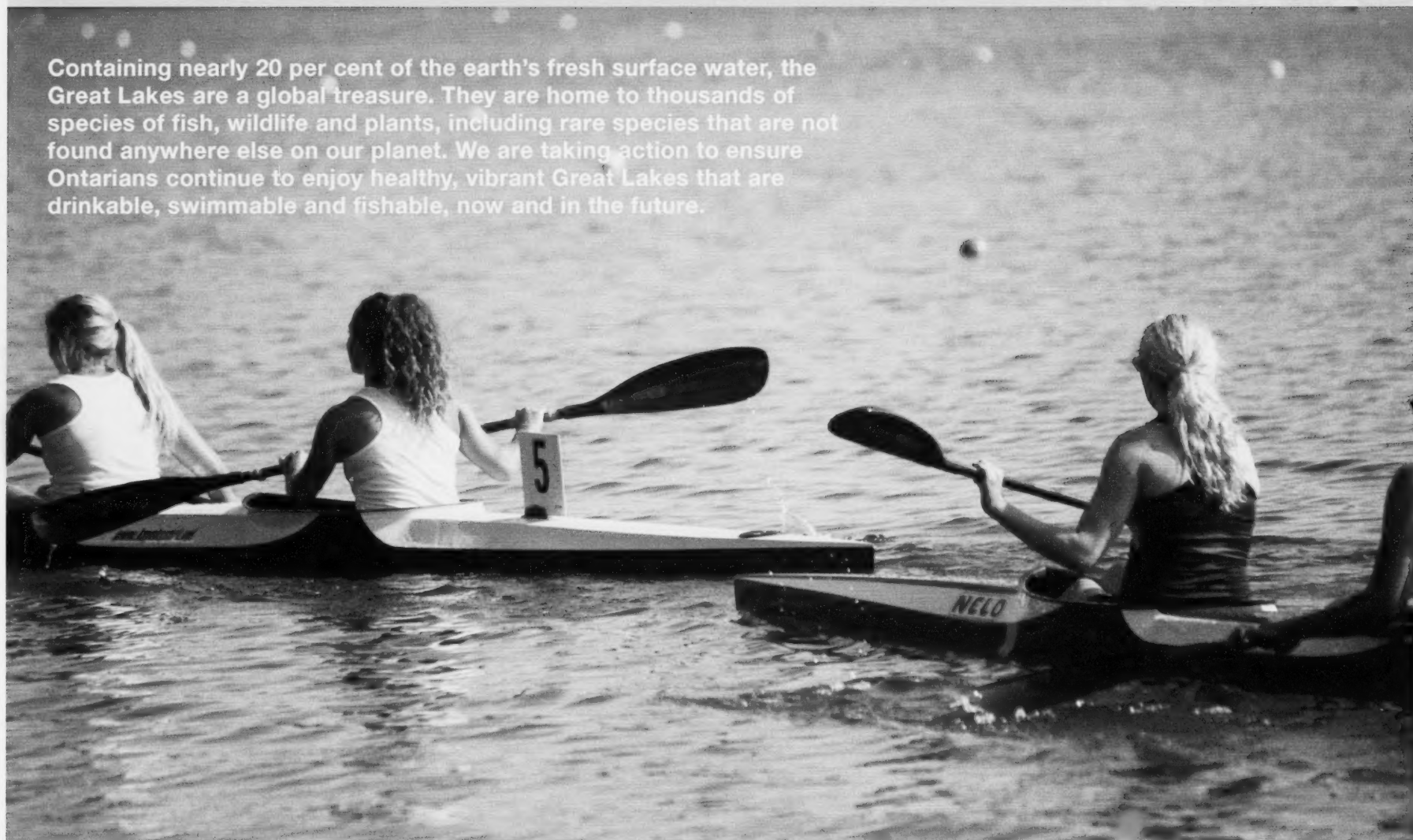
The Alderville, Lac Seul (Whitefish), Munsee-Delaware and Zhiibaahaasing First Nations are participating in this initiative, and are leading the process of commissioning appropriate design and technology solutions for their communities.

Aboriginal Affairs and Northern Development Canada will grant up to five million dollars in capital investment, while my ministry and the Ontario First Nations Technical Services Corporation will provide support and training for the communities. We hope that by working together with First Nations, we can help the communities and at same time gain insight into what may work for other communities across Ontario.

***"It is through collaborative projects such as this one that First Nations can build capacity and foster technical self-reliance for their respective communities."*** — Bob Howsam, Executive Director, Ontario First Nations Technical Services Corporation

# Developing Areas of Interest In Drinking Water.

Containing nearly 20 per cent of the earth's fresh surface water, the Great Lakes are a global treasure. They are home to thousands of species of fish, wildlife and plants, including rare species that are not found anywhere else on our planet. We are taking action to ensure Ontarians continue to enjoy healthy, vibrant Great Lakes that are drinkable, swimmable and fishable, now and in the future.





## Keeping our Great Lakes Great

Ontario families depend on the Great Lakes for drinking water, quality of life, and prosperity. About 98 per cent of Ontarians live within the Great Lakes and St. Lawrence basin. It is our duty to keep the Great Lakes healthy so all Ontarians can enjoy them now and in the future.

Although we have made great progress in reducing toxic substances throughout the Great

Lakes, efforts to clean up historical contamination (e.g., mercury) continue to be a priority.

The lakes face additional threats including climate change, invasive species, algal blooms and new chemicals of concern, all of which could adversely impact the quality of our drinking water and the environment.

We recognize the importance of the Great Lakes to the millions of people who live, and play near these waters and rely on its economic value.

And, for that reason, my ministry will continue

with its efforts to promote collaboration and coordination among Great Lakes leaders including First Nations and Métis communities, Ontario ministries, government bodies and other stakeholders making it easier to share information, discuss priorities, and develop initiatives focused on priority geographic areas.

For more information about protecting the Great Lakes, please visit [www.ene.gov.on.ca/environment/en/subject/great\\_lakes/index.htm](http://www.ene.gov.on.ca/environment/en/subject/great_lakes/index.htm).

### GREAT LAKES GUARDIAN COMMUNITY FUND

More than 98 per cent of Ontarians live and work around the Great Lakes and St. Lawrence River Basin. We care about protecting these lakes and rivers and want them to remain healthy and clean for years to come.

The Great Lakes Guardian Community Fund, which was announced in July 2012, was established to help communities restore and protect their part of the Great Lakes.

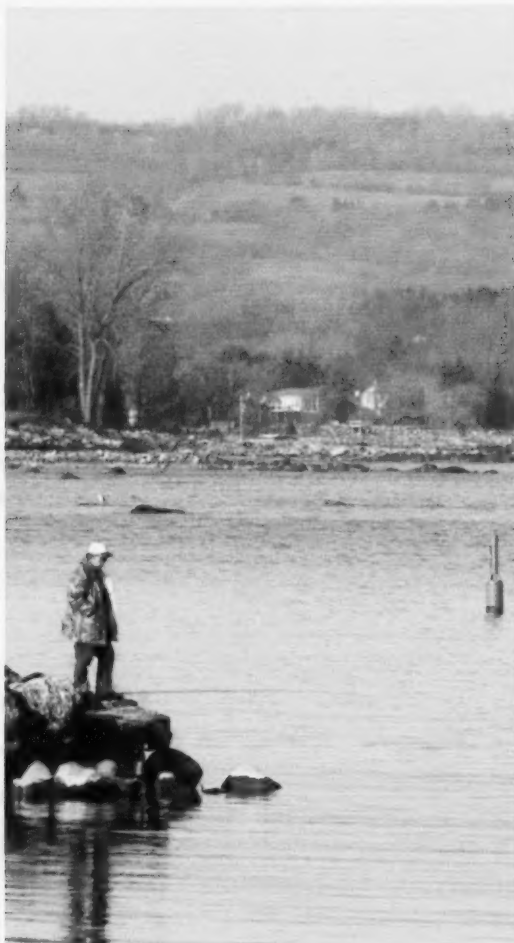
This initiative enabled non-profit organizations, environmental and conservation organizations, and First Nations and Métis communities and organizations to apply for grants of up to \$25,000 for projects that contribute to at least one of these goals: empowering Great Lakes communities; protecting water; improving wetlands, beaches, and coastal areas; or protecting habitats and species. The application period closed in October 2012.

Visit [www.ontario.ca/GreatLakesFund](http://www.ontario.ca/GreatLakesFund) for more details about the fund.

### Quick Fact

More than 80 per cent of Ontarians get their drinking water from the Great Lakes.





## ONTARIO'S DRAFT GREAT LAKES STRATEGY

To support and achieve Ontario's vision of healthy Great Lakes that continue to be drinkable, swimmable and fishable, my ministry released a draft Great Lakes Strategy on June 6, 2012 for public comment.

([www.ene.gov.on.ca/stdprodconsume/groups/tr/@ene/@resources/documents/resource/stdprod\\_096950.pdf](http://www.ene.gov.on.ca/stdprodconsume/groups/tr/@ene/@resources/documents/resource/stdprod_096950.pdf)).

The draft Great Lakes Strategy outlines Ontario's planned actions to help protect and restore the Great Lakes. These actions are focussed around six goals: empowering communities; improving water quality; protecting wetlands, beaches and coastal areas; protecting habitats and species; enhancing understanding and adaptation; and ensuring environmentally sustainable economic opportunities and innovation.

We will address these goals through Great Lakes agreements, partnerships and collaborations. Drinking water priorities are reflected

throughout the Strategy, as it fosters clean safe water, communities engaged in source protection, and water innovations that benefit the safety and affordability of drinking water. The Strategy will guide my ministry's work with local partners and with other governments around the Great Lakes.

## AGREEMENTS TO PROTECT THE GREAT LAKES

Many environmental organizations, government bodies and individuals are working to protect and preserve the Great Lakes ecosystem and ensure its sustainability. Ontario has taken an active role in these efforts and has entered into a number of agreements that protect the lakes on basin-wide, lake-wide and local levels.

### Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem

Ontario and the federal government have made a commitment to work together to restore, protect and conserve the Great Lakes Basin Ecosystem.



Leaky taps waste water and cost you money. Fixing the leak or replacing the tap will reduce your water bill and help you conserve water.



The Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem supports the restoration and protection of the Great Lakes basin ecosystem and includes commitments directly related to drinking water source protection.

Ontario and the Government of Canada are negotiating a new agreement that would continue joint efforts to protect and restore habitat, prevent pollution, clean up environmental hotspots, deal with invasive species and protect the biodiversity of the Great Lakes basin.

#### **Great Lakes and St. Lawrence Cities Initiative — Memorandum of Cooperation**

Municipalities play a crucial role in the protection of the Great Lakes. My ministry's partnership with the bi-national coalition of 90 Canadian and American mayors allows us to further protect, restore and promote the Great Lakes and St. Lawrence basin. It makes sense to work together with communities on priorities that protect beaches and coastal health, promote the benefits of Great Lakes investments and advance projects on stormwater management.



Mayor Brian McMullan, City of St. Catharines and The Honourable Jim Bradley, Minister of the Environment, renew the Great Lakes and St. Lawrence Cities Initiative.

The province renewed its Memorandum of Cooperation on the Great Lakes with Ontario's Great Lakes municipalities effective on the 1st of June 2012. This two-year agreement will allow us to carry on our efforts to ensure Great Lakes and St. Lawrence River communities continue to thrive well into the future.

#### **Canada-U.S. Great Lakes Water Quality Agreement**

The purpose of the Canada-U.S. Great Lakes Water Quality Agreement is to restore and maintain the chemical, physical and biological integrity of the waters of the Great Lakes Basin Ecosystem. The first Great Lakes Water Quality Agreement was signed in 1972, renewed in 1978, and amended in 1987.

On September 7, 2012 in Washington, D.C., Canada and the U.S. signed an amended Great Lakes Water Quality Agreement — officially titled the Great Lakes Water Quality Protocol of 2012. Ontario will be using the bi-national agreement to inform our negotiations for a new Canada-Ontario Agreement for the Great Lakes.



## Protecting Lake Simcoe

The protection of Lake Simcoe has long been a source of great pride for area residents — and this province.

With the passage of the Lake Simcoe Protection Act, my ministry aimed to enshrine in law safeguards to help restore this vulnerable water source.

To date, our ongoing efforts to protect the lake have resulted in an overall decrease in spring phosphorous levels and an increased number of cold water fish. Ministry staff have also provided assistance and technical advice to over 1,500 stewardship projects by landowners.

## Implementing the Water Opportunities Act

Ontario is known around the world for its safe, clean water — and for innovation.

The water and wastewater sector already employs 22,000 people and generates \$1.8 billion in sales. The Water Opportunities Act builds on the economic and innovative strength of our water and wastewater sector and positions Ontario as a competitive leader in what is expected to be a \$1 trillion global water sector by 2020.

The Water Opportunities Act encourages a high level of cooperation, knowledge sharing

and partnership to better enable Ontario technology companies to compete for their share in a growing marketplace. The act provides a platform for government, industry and communities to support, foster and create new ways to help keep our water clean and safe to drink.

The Southern Ontario Water Consortium is an excellent example of how experts from universities, businesses, industry and government are working together to give innovative water companies better access to important data and municipal water infrastructure.



Are you interested in more savings? Run your dishwasher or washing machine only when fully loaded. Using the lightest cycle on your dishwasher is usually enough to clean your dishes and uses less water and energy.





## SHOWCASING WATER INNOVATION IN ONTARIO

We know the importance of recognizing and supporting groundbreaking products and services that foster and strengthen the clean water economy in Ontario.

Showcasing Water Innovation, a provincial program supporting the Water Opportunities Act, allows Ontario's communities to adopt leading-edge and cost-effective solutions to better manage drinking water, wastewater and stormwater systems.

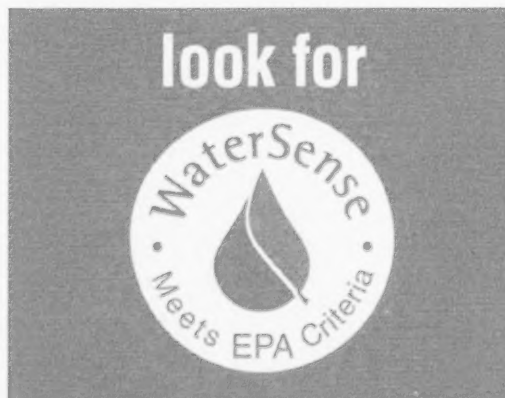
Thirty-two projects are receiving funds under this program. Innovative projects include Credit Valley Conservation Authority's work with partners to encourage low impact development approaches to stormwater and conserving water.

If you are interested in learning more about these community-driven activities, please visit [www.ontario.ca/waterinnovation](http://www.ontario.ca/waterinnovation).



## WANT TO CONSERVE WATER? LOOK FOR WaterSense

Earlier this year, my ministry introduced a new program to help consumers make greener choices by clearly identifying products carrying the WaterSense label that have been tested and proven to use less water. We have been encouraging manufacturers to sign up for this voluntary program that has enjoyed tremendous success in the U.S. The program works much like ENERGY STAR® which identifies energy efficient products.



# Closing Message.

**Clean, safe drinking water is essential to life. It is one of the most vital pillars of a strong, green economy. Thanks to a collective commitment from municipalities, First Nations communities, community groups, citizens and innovative businesses, Ontarians can be confident that their tap water is safe to drink.**



# Glossary.

**Accredited:** for the purposes of the Safe Drinking Water Act, being accredited involves a process in which the competence and integrity of an agency, firm, group, or person, is certified by an accreditation body that is designated under the act.

**Benthos:** insects, worms, crustaceans and other organisms, without a backbone that live in, on or near the bottom of water bodies.

**Conservation Authorities:** local watershed management agencies that deliver services and programs that protect and manage water and other natural resources in partnership with government, landowners and other organizations ([www.conservation-ontario.on.ca](http://www.conservation-ontario.on.ca)).

**Local Services Boards:** provide services in communities in areas of Northern Ontario without municipal structure. Local Services Boards are established pursuant to the Northern Services Boards Act administered by the Ministry of Northern Development and Mines. A Local Services Board (the Board) may provide various services (including, in some cases, water services) to inhabitants of the Board area (the geographical area within which the Board can exercise its jurisdiction). Drinking water systems run by Local Services Boards are generally categorized as non-municipal year round residential systems under O. Reg. 170/03 under the Safe Drinking Water Act.

**Municipal Residential Drinking Water Systems:** drinking water systems or part of a drinking water system that serve six or more private residences that meet the definition of municipal drinking water system under the Safe Drinking Water Act and its regulations. These systems include the categories of large municipal residential and small municipal residential drinking water systems under O. Reg. 170/03 under the act.

**Nanofibre membranes:** filters created using fibers that have a diameter less than 1000 nanometers. The types of chemicals that are prevented from entering the drinking water by these membranes are a function of the size of the pores (holes) in the membrane.

**Non-municipal Year-round Residential Drinking Water Systems:** non-municipal drinking water systems (other than seasonal residential systems) that serve a major residential development (six or more private residences) or a trailer park or campground with more than five service connections. These systems are a single category defined in O. Reg. 170/03 under the Safe Drinking Water Act.

**Ontario Drinking Water Quality Standards:** regulated standards (O. Reg. 169/03, Ontario Drinking Water Quality Standards made under the Safe Drinking Water Act) for microbiological, chemical and radiological parameters that, when present above certain concentrations in drinking water, have known or suspected adverse health effects and require corrective action.

**Operating Authority:** the person or entity that is given responsibility by the owner of a drinking water system for the operation, management, maintenance or alteration of the system.

**Polar Organic Chemical Integrative Samplers:** a special type of environmental monitoring device. The device can be left in water (lakes, rivers, wastewater and drinking water) for extended periods of time (days to weeks). The samplers can selectively capture chemicals (pharmaceuticals and/or pesticides) over longer periods of time versus typical grab samples that are used in environmental monitoring. These devices are very useful as they allow scientists to detect substances at very low concentrations and to assess exposures over longer periods of time.

**Systems Serving Designated Facilities:** drinking water systems serving, for example, children's camps, daycare centres, schools or health care facilities. These systems fall under the five categories of non-residential and seasonal residential systems defined in O. Reg. 170/03 under the Safe Drinking Water Act. They are large municipal non-residential, small municipal non-residential, large non-municipal non-residential, small non-municipal non-residential and non-municipal seasonal residential categories of drinking water systems.

**Watershed:** area of land where all of the water that is under it or drains off of it goes into the same watercourse or body of water.

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**For more information:**  
**[www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater)**

